DOCUMENT RESUME

ED 147 467 08 CE 012 953

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TITLE Project Explore. Final Report.
INSTITUTION Norwich Regional Vocational Technical School, Conn.
SPONS AGENCY Bureau of Occupational and Adult Education (DHEW/OE), Washington, D.C.; Connecticut Vocational Education Research and Planning Unit, Hartford.
PUB DATE 25 Jun 77
NOTE 25p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Audiovisual Aids; *Audio Visual Programs; Career Choice; *Career Exploration; Career Planning; *Grade 9; Graduate Surveys; High School Students; *Occupational Choice; Occupational Guidance; Parent Attitudes; Senior High Schools; *Student Attitudes; Surveys; Video Tape Recordings; Vocational Development; *Vocational Education; Vocational Followup; Vocational High Schools; Vocational Interests

ABSTRACT

Project Explore sought, through the use of videotape, to introduce incoming vocational technical students to different trades by providing a maximum of information in a minimum amount of time. Two occupations, sheetmetal and graphic communications (printing), were chosen to be presented in this manner, showing such activities as workers at their trades in factories and shops, management discussing desirable worker characteristics, and supervisors describing job qualifications. The sheetmetal film was shown to a random sampling of 89 seniors, 107 freshman, and 23 parents (parents were also shown parts of the graphics tape), and each reviewer was asked to complete a relevant questionnaire. Seventy-six percent of the freshmen and 66% of the seniors stated that they believed the videotape would encourage future students to pursue a career in sheetmetal, while the majority of parents stated the films would be most valuable in an exploratory program. As an adjunct to the project, a graduate survey was administered to determine what influenced the choice of occupational study. Thirty-two percent responded, and the majority indicated they chose their field because "it seemed interesting," and the graphic and sheetmetal graduates chose field trips and audiovisual presentations as keys to encouraging freshman students into the field. Recommendations included making the project's findings available to other area schools and expanding the project to include all trade areas. Survey instruments are appended. (BL)

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PROJECT EXPLORE

FINAL REPORT

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June 25, 1977

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CONNECTICUT STATE DEPARTMENT OF EDUCATION
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OE 012 953

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Preface

Project Explore's successes are the result of the efforts of many individuals. Much credit must go to the businesses that responded to our request for assistance. We are grateful to the following firms for their help: Amstar Sugar, Commercial Printers, Crown Sheetmetal, Federal Paperboard, H.R. Hillery Co., M.S. Chambers, Kaman Aerospace, Robertson Paperbox, and Thames Printing.

We would also like to thank the personnel of the Research and Planning Unit, Division of Vocational Education for their assistance throughout this project.

Summary

The exploratory program in the vocational-technical schools is a period of time when incoming students are introduced to different trades to help them choose their future careers. Different pressures have built up over the years that tend to diminish the effectiveness of this program.

Project Explore sought, through the use of videotape, to transmit information concerning the world of work in a time and cost-efficient manner. Videotaping was done in factories and shops of workers at their trade, of management discussing desirable worker characteristics, of supervisors describing job qualifications, etc. These tapes were then edited into two presentations, one in graphic communications and one in sheetmetal.

The tapes were shown to freshmen, seniors, and parents for evaluation purposes. These same tapes will be used next year in the exploratory program.

As a result of this project, we concluded that more up-to-date information about the various trades is needed. We also found that videotape is an excellent tool for presenting this information.

We recommend that the concept of Project Explore be continued and expanded in the future and that information concerning the use of videotape be offered to those interested in preparing similar materials.

Background

The exploratory program in the vocational-technical schools has undergone long and rigorous testing and has consistently proven to be a valuable part of the ninth-grade curriculum. In this program incoming students spend a number of days being exposed to various shop programs. Based on these introductions to each trade, a student must choose the career which he will pursue while in the technical school program and which may ultimately be his life's work.

In years past the number of days spent in each shop at Norwich Tech has been as high as ten. Students currently spend four days in each exploratory cycle. When the number of trade offerings was smaller, each student visited each shop. Now, students must choose eight out of ten shops available. The trades themselves are becoming more and more complex. Some instructors are becoming concerned about the increasing difficulty of introducing a very complicated career field to uninformed ninth-graders in a rapidly decreasing amount of time. As technical education has gained in popularity, the number of students per group in the exploratory cycles has risen.

All of these factors have placed increasing burdens on the instructors and students in the exploratory program. It was in response to these problems that Project Explore was created. It is our hope that we can partially alleviate these problems through the materials developed in the past year and those that we plan to develop in the future.

Methods

Project Explore's response to the problems in the exploratory program was the creation of a series of videotapes which would give the incoming student the maximum amount of information in the minimum amount of time. We were well-aware that students often have no concept of what the world of work is like. Some of the better known occupations such as automotive mechanic and carpenter are less mysterious, but some trades are completely foreign to the general population. For our pilot project, graphic communications and sheetmetal were chosen because their identity is less evident to most ninth-graders.

Our strategy for Project Explore involved visiting businesses in the two pilot trade areas and videotaping on-site activity. The project's visitation team included an instructor and a student from the shop involved, the media coordinator, and a student media assistant. This team took a portable VTR and went into factories and shops, interviewing management and labor, in an attempt to determine attitudes toward the two trades. We asked what it was that workers liked about their jobs, what training they had , what opportunities they could see in the future. We spoke with technical school graduates and with people whose training had been on-the-job. Without exception they regarded vocational education as an asset and we feel that this positive attitude will be passed on to the exploratory student.

Recognizing that the equipment in many of Norwich Tech's shops is becoming outdated, we attempted to show new trade methods such as computer-assisted equipment and semi-automated machinery. We tried to capture on

videotape the feeling of working in the two different occupations. The sights and sounds of actual working conditions were shown as we interviewed the various personnel.

Our proposal for this project called for 2½ days for visiting in each of the two trade areas. We found this amount of time to be slightly confining, but we were able to gather a good quantity of valuable footage for our final tapes. This raw footage was viewed, selected, and edited into one tape for each trade area. This work was very time-consuming, but it was here that the determination of emphasis and approach was made. As a result of the editing, the sheetmetal tape became primarily attitudinal while the graphic communications tape was more informational. The raw footage will be kept on file so that future tapes can be prepared for different audiences.

For example, we see the possibility of preparing a series of tapes for seniors before they enter the job market. We could prepare a tape showing clusters of trade areas for parents who need to assist their children in choice of trades. Career education tapes could be assembled for eighth-graders who are considering choosing vocational education.

The flexibility of the videotape medium allows for constant revision and frequent updating. If new opportunities arise in the two pilot areas, it will be a simple matter to take the portable equipment on-site and tape new information. This new material can be inserted into the existing tape in place of outdated material or added onto the end of the tape as supplementary information. It is also possible to re-edit the complete tape if we wish to change direction or emphasis.

Our industrial visitations all took place in the geographical region served by Norwich Tech. The emphasis was placed on local businesses and industries, therefore, the tapes may seem limited to use for Norwich Tech students only. However, the information contained on the tapes deals with the trades in a very general manner. It is our hope that these materials will be of value to other technical schools. They may be used as is by instructors in sheetmetal or graphic communications, or they may serve as models for schools wishing to initiate similar programs.

Findings and Analysis

The evaluation of any project is not only important but it is proof of viability. Our vehicle for evaluation was the survey. As proposed in our initial write up of "Project Explore" we surveyed four (4) distinct groups of people: 1) graduates of our school; 2) parents of our currently enrolled students; 3) seniors in our school, and 4) freshmen at our school.

The survey of our graduates involved 210 individuals. Eighty-six of those surveyed were graduates of the sheetmetal department, of these, twenty-seven responded. Of the forty-six graphic communications graduates mailed surveys, fourteen responded. The remainder of the 210 were a random sampling of graduates from other shop areas beside graphics and sheetmetal. Of these, seventy-eight individuals, twenty-four returned the survey sheets. Our response rate overall was 32%; small but somewhat better than other surveys we have initiated with our graduates.

A copy of the graduate survey is enclosed in the appendix. In the sheetmetal and graphics surveys we attempted to obtain two major bits of information: why these individuals chose to study one of those trades and how more students could be encouraged into graphics or sheetmetal. Although our response rate for those two surveys combined was only 31%, the completeness more than compensated. There was <u>not one</u> of these forms returned without additional commentary on them. It was as if these graduates had just been waiting patiently for us to petition them.

The graphic communications graduates seem to have primarily chosen their field because "it seem interesting". Four of the fourteen responding studied in this area because they were transfers from another school and it was the only one available to them.

As to how we could encourage more students to study graphic communications, most of the graduates were in favor of field trips to industry (six); another group (four) favoring audio-visual presentations, and still another group (three) in favor of long exploratory cycles. Exploratory cycles are normally about four days at present but in fact were longer when these graduates were in ninth grade at Norwich Tech.

Comments on the graphic communications graduate survey were consistent in emphasizing the updating of our program to be more in tune with that which is being done in industry. Many graduates pointing out that this could be accomplished by a combination of funds for new equipment, field trips, and audio-visual presentations of local printing establishments.

Twenty-seven of the eighty-six sheetmetal graduates responded to our mailing. Again, most (thirteen) chose their field of endeavor because of the interest factor. But a close (nine) second choise was the fact that they felt that in choosing the sheetmetal trade they would be able to obtain work easily. Some of the graduates were disappointed in that this was not always the case. For construction sheetmetal work, the graduates emphasized the fact that travel, even out of state, was a must to staying employed in the trade. Like the graduates of graphics the graduates of sheetmetal chose the field trips (eleven) and audio-visual presentations as keys to encouraging the freshman student into the field.

The final graduate survey was the random sampling (seventy-eight) of graduates from other courses of study. Three pieces of information were obtained from the twenty-four individuals who responded: 1) why they chose the field they studied; 2) why they did not choose graphic communications or sheetmetal; and 3) what would have made the exploratory program more

valuable to them when they were in the ninth grade.

The consensus for choice of trade seem to be most effected by the interest factor with the second most checked item being that which denoted the thought of getting work easily in that chosen trade. It would seem to be a fact that interest is the true motivating force.

As for the reasons for not choosing the graphics trade most graduates noted that this trade was not offered at the time they attended Norwich Tech (the graphic communications trade was not offered until September 1969). But for those that did have the opportunity to explore the trade the interest factor again shows through as most responded that the trade seemed "very uninteresting".

Of fourteen individuals who answered the question "why did you choose not to study sheetmetal?"; twelve answered that it "seemed very uninteresting". The other two respondents answered that they "didn't like it" - a unanimous vote for "interest" as a major factor in choosing a trade.

As far as what would have made the exploratory program more valuable, the graduates from the random sampling were evenly divided. Exactly seven individuals answered to one of the categories listed: audio-visual presentations, field trips, and longer exploratory cycles. The "other" category brought out comments such as: "more realism", "knowledge of job opportunities", and "less theory work".

In summation of the graduate surveys it can be stated that all the graduates responding were most positive in their criticism and most anxious to assist in providing better vocational education to the youth of Connecticut. It can also be assumed from these graduate surveys that "Project Explore" is a step in the right direction. As stated above,

each individual added comments to the surveys and overall the comments were in support of programs that would better demonstrate the opportunities in the fields of graphic communications and sheetmetal.

The second group of persons we surveyed were parents of our students who are presently enrolled at Norwich Tech. This was accomplished at a Parent Faculty Organization meeting at which 23 parents were present. These parents were first shown the completed videotape of the sheetmetal trade and parts of the graphics tape. These same individuals were given a written survey as the response vehicle. (See copy in appendix.) The twenty respondents were unanimous in their opinion that the tapes would encourage students to pursue a career in either graphic communications or in sheetmetal. Their comments concerning the videotape presentations were most complimentary. Typical of the comments was the following: "Certainly a decision as important as the one the 9th grade Voc-Tech student must make is one of the most important they will make. Obviously it is desireable that the decision be made on the basis of factual info rather than "taking shots in the dark". The tapes look like they will provide the type of information. A valuable program. Well done!"

The final question again asked what would make the exploratory program more valuable to a ninth grader. The majority stated the audio-visual presentations would be the most valuable. Of course, we must be realistic and consider the "pleasing" factor. These had just viewed tapes which were produced by people present. But considering this fact in light of the comments made on the survey sheets the sincerity of the individuals comes through and the validity is left unchallenged.

The last groups surveyed can be considered at the same time. Both groups were students presently enrolled at Norwich Tech. The first of

the two were a random sampling of seniors (89 individuals) and the second being a sampling of freshmen (107 individuals). Both groups were asked the same questions with the exception of one question asked the freshmen and not the seniors (refer to appendix). As had been done with our graduates, these students were asked the main reason for their choice of trades. An overwhelming 73% stated that the trade they chose "seemed like an interesting field".

These two groups were only able to see the completed sheetmetal tape so that none of the questions dealt with the graphic communications portion of the project. None of the students surveyed were in the sheetmetal trade. As to why the students questioned did not choose the sheetmetal trade 47% stayed away from it because it "seemed very uninteresting", and 33% felt they "did not have enough information concerning the trade (sheetmetal)" when they made their choice. Only 9% of those questioned said that the pay scale seemed inadequate.

Seventy-six percent of the freshmen and sixty-six percent of the seniors stated that they believed the videotape would encourage future students to pursue a career in the sheetmetal trade. Without question a vote of confidence for the project.

An interesting conclusion can be drawn from the answers to the question concerning what would have made the exploratory program more valuable to the students surveyed. When the seniors who were questioned were in their freshman exploratory year they were able to explore the different shop offerings for five days a piece. Twenty-six percent of these students answered that "longer exploratory cycles would have been of help". On the other hand, the freshmen students surveyed had only spent three to four days in each exploratory cycle and fifty-three percent of these

individuals spoke in favor of longer exploratory cycles. The remainder of each of the two groups were evenly divided in favor of more field trips and audio visual presentations. The information gained from this question alone will not only assist the staff of Norwich Tech in assessing the value of "Project Explore" but even more significantly will assist in future planning of the total exploratory program at the school, perhaps in other Vocational Technical schools throughout the State of Connecticut.

The one question which was asked the freshmen and not the seniors was that which stated: "would you consider changing to sheetmetal shop from the shop you are presently assigned?" Four individuals answered affirmatively to this question. Perhaps not the overwhelming number that we would hope the tape would convert, but considering the strong allegiance that our students feel toward their assigned shops, it is enough to provide hope for the future.

The true evaluation of Project Explore will be in the future as next years freshmen are shown the tapes of both graphic communications and sheetmetal as part of the regular exploratory program and as these students are polled as to the tapes role in choosing their trade, it is then that we will be able to measure the value of the project. It is then that we will be capable of determining its viability!

Conclusions

Based upon our original analysis of the problems facing the exploratory program and our survey of graduates, it is safe to conclude that there is a need for more information concerning opportunities in the different trades. The method for best presenting this information is what Project Explore hopes to offer. It is obvious that although many graduates felt that more field trips would be desirable, the cost and logistics of such programs would prohibit their use in the exploratory program. By the same token, longer exploratory cycles, although desirable, don't seem to be possible in the near future.

The only effective and available device for presenting more information seems to be audiovisual media. The videotapes prepared by Project Explore will, in the years ahead, try to remedy the problems perceived by the staff and graduates of Norwich Tech. Our initial test of their effectiveness through the freshman, senior, and parent surveys seems to indicate that they have great potential for success. The use of media to increase awareness has long been recognized in other educational areas. It is rewarding to find that vocational education may now be ready to reap its benefits.

One comment that was recurring throughout the student surveys was that tapes should be prepared for all trade areas. This leads us to conclude that the desire for more information concerning the trades exists not only in graduates (as their survey indicated), but in seniors and freshmen as well. This healthy curiosity is an encouraging sign and we should do all that we can to satisfy it.

The fact that seventy-six percent of the freshmen thought that the videotapes would be valuable to future students can be seen not only as support for Project Explore but as evidence of the effectiveness of media in communicating with this electronically and visually-oriented generation.

Recommendations

Project Explore, though finished as a formally-funded project, is by no means finished as a concept. We view the widespread acceptance of the project by students, graduates, parents, and people in industry as an indication that our work should continue. We would recommend that our findings and materials be made available to other schools in our system. The potential for the use of videotape in similar programs is limitless.

The technical problems which we encountered and the mistakes which we made should not have to be repeated. We would like to recommend that training opportunities in the use of videotape be offered within the system for those interested in similar projects.

We further recommend that Project Explore be continued and expanded to encompass all trade areas. This could be accomplished either through further state or federal funding or through its incorporation into the Bureau of Vocational Education's regular budget.

Appendixes

I. Graduate Survey - General

II. Graduate Survey - Graphic Communications

III. Graduate Survey - Sheetmetal

IV. Freshman Survey

V. Senior Survey

VI. Parent Survey

Graduate's Name (optional): _____

Trade for which trained at Nerwich Tech: _____

Year of Graduation: _____

Present Occupation: _____

Employer: _____

1) Why did you choose the trade which you studied at Tech?

- ☐ I thought I could get work in this trade easily.
- ☐ My friends were in this trade.
- ☐ I liked the instructors.
- ☐ It looked easy during exploratory.
- ☐ It seemed like an interesting field.
- ☐ Other: _____

2) Why did you choose <u>not</u> to study Printing?

- ☐ Not available when I attended.
- ☐ Seemed very uninteresting.
- ☐ Pay scale was not adequate.
- ☐ Other: _____

3) Why did you choose <u>not</u> to study Sheetmetal?

- ☐ Not available when I attended.
- ☐ Seemed very uninteresting.
- ☐ Pay scale was not adequate.
- ☐ Other: _____

4) What would have made the Exploratory Program more valuable to you when you were in grade 8?

- ☐ Audio Visual Presentations
- ☐ Field Trips
- ☐ Longer Exploratory Cycles
- ☐ Other: _____

March 25, 1977

GRADUATE SURVEY FORM #1A

A. I chose to study the Graphic Communications trade because: (Printing)

- ☐ I thought I could get work in the trade easily.
- ☐ My friends were in Graphic Comm. (Printing)
- ☐ I liked the instructors.
- ☐ It looked easy during exploratory.
- ☐ It seemed like an interesting field.
- ☐ Other: _____

_____

B. Why do you think some of your classmates did <u>not</u> choose Printing?

C. What would you change about the Printing course at Norwich Tech?

D. How could more Freshmen be encouraged to chose Printing as their field of study?

- ☐ Audio Visual Presentations
- ☐ Field Trips
- ☐ Longer Exploratory Cycles
- ☐ Other: _____

_____

March 25, 1977

GRADUATE SURVEY FORM #1A

A. I chose to study the Sheetmetal trade because:

- ☐ I thought I could get work in the trade easily.
- ☐ My friends were in .
- ☐ I liked the instructors.
- ☐ It looked easy during exploratory.
- ☐ It seemed like an interesting field.
- ☐ Other: _____

_____

B. Why do you think some of your classmates did not choose Sheetmetal?

C. What would you change about the Sheetmetal course at Norwich Tech?

D. How could more Freshmen be encouraged to chose Sheetmetal as their field of study?

- ☐ Audio Visual Presentations
- ☐ Field Trips
- ☐ Longer Exploratory Cycles
- ☐ Other: _____

_____

May 31, 1977

PROJECT EXPLORE - FRESHMAN STUDENT SURVEY (Sheetmetal)

Shop: (Circle One) AC, Auto, BC, Carp, EL, GC, EN, MD, MT, PL, SM.

1. Why did you choose the trade which you studied at Tech?

___ I thought I could get work in this trade easily.

___ My friends were in this trade.

___ I liked the instructors.

___ It looked easy during exploratory.

___ It seemed like an interesting field.

___ Other: _____

2. Why did you choose not to study sheetmetal?

___ Did not have enough information concerning the trade.

___ Seemed very uninteresting.

___ Pay Scale was not adequate.

___ Other: _____

3. After viewing the Video-Tape do you believe it will encourage students to pursue a career in the Sheetmetal trade?

___ YES ___ NO

4. What would have made the Exploratory Program more valuable to you?

___ Audio Visual Presentations

___ Field Trips

___ Longer Exploratory Cycle

___ Other: _____

5. Would you consider changing to Sheetmetal shop from the shop you are presently assigned?

___ YES
___ NO EXPLAIN: _____

6. Please give any comments concerning the Video-Tape Presentation:
(Please write comments on reverse side.)

May 31, 1977

PROJECT EXPLORE - SENIOR STUDENT SURVEY (Sheetmetal)

Shop: (Circle one) AC, Auto, BC, Carp, EL, GC, EN, MD, MT, PL, SM.

1. Why did you choose the trade which you studied at Tech?

___ I thought I could get work in this trade easily.

___ My friends were in this trade.

___ I liked the instructors.

___ It looked easy during exploratory.

___ It seemed like an interesting field.

___ Other: _____

2. Why did you choose not to study sheetmetal?

___ Did not have enough information concerning the trade.

___ Seemed very uninteresting.

___ Pay scale was not adequate.

___ Other: _____

3. After viewing the Video Tape do you believe it will encourage students to pursue a career in the Sheetmetal trade?

___ YES ___ NO

4. What would have made the Exploratory Program more valuable to you when you were in grade nine?

___ Audio Visual Presentations

___ Field Trips

___ Longer Exploratory Cycle

___ Other: _____

5. Please give any comments concerning the Video-Tape Presentation:
(Please write comments on reverse side.)

May 17, 1977

PROJECT EXPLORE

Parent Survey:

1) After viewing the Video Tapes do you believe it will encourage students to pursue a career in Graphic Communications?

YES _____ NO _____

2) After viewing the Video Tape do you believe it will encourage students to pursue a career in the Sheetmetal Trade?

YES _____ NO _____

3) Please give any comments concerning the Video Tape presentation.

4) What do you think would make our Exploratory Program more valuable to a ninth grade student?

_____ Audio-visual presentations

_____ Field Trips

_____ Longer Exploratory Cycle

_____ Other (Please Specify)